

PATENT
Serial No. 10/517,976
Amendment in Reply to Final Office Action mailed on May 5, 2006

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Method for coding a stream of input words using a channel code,
comprising the steps:
[[-]] precoding the stream of input words into a stream of precoded input words; and
[[-]] coding the stream of precoded input words into a stream of groups of N code words;
characterized in that ~~in a precoding,~~ a running digital sum of each group of N code words equals zero.

2. (Original) Method as claimed in claim 1, characterized in that N equals 2.

PATENT

Serial No. 10/517,976

Amendment in Reply to Final Office Action mailed on May 5, 2006

3. (Previously Presented) Method as claimed in claim 1, characterized in that after the step of coding the stream of precoded input words into a stream of groups of N code words the method comprises the step of storing the groups of N code words using a groove position modulation on a storage medium

4. (Previously Presented) Method as claimed in claim 1, characterized in that coding the precoded stream of input words is achieved using a parity preserving coder.

5. (Previously Presented) Method as claimed in claim 1, characterized in that coding the precoded stream of input words is achieved using a parity inverting coder.

6. (Original) Method as claimed in claim 4 characterized in that the parity preserving coder is a 17PP coder

7. (Original) Method as claimed in claim 6, characterized in that the stream of M input words is precoded using the following table:

PATENT
Serial No. 10/517,976
Amendment in Reply to Final Office Action mailed on May 5, 2006

In	Out
00	1010
01	0001
10	0111
11	0101
1010	00001000

8.(Original) Method as claimed in claim 6, characterized in that the stream of M input words is precoded using the following table:

In		Out
00	->	10 10
10	->	00 01
11	->	01 11
01	->	01 01
11 11	->	00 00 10 00

PATENT

Serial No. 10/517,976

Amendment in Reply to Final Office Action mailed on May 5, 2006

9. (Previously Presented) Method as claimed in claim 7, characterized in that before the step of storing the groups of N code words in using the groove position modulation on the storage medium remaining DC components are removed using a high-pass filter

10. (Original) Apparatus for storing data on a recording medium comprising an encoder which arranged for coding the stream of precoded input words into a stream of groups of N code words and comprising a precoder for coding the stream of input words into a stream of precoded input words, characterised in that a running digital sum of each group of N code words equals zero.

11. (Original) Apparatus as claimed in claim 10, characterized in that N equals 2.

12. (Previously Presented) Apparatus as claimed in claim 10, characterized in that the apparatus is arranged for storing the groups of N code words using a groove position modulation on a storage medium

PATENT

Serial No. 10/517,976

Amendment in Reply to Final Office Action mailed on May 5, 2006

13. (Previously Presented) Apparatus as claimed in claim 10, characterized in that the encoder is a parity preserving coder.

14. (Previously Presented) Apparatus as claimed in claim 10, characterized in that the encoder is a parity inverting coder.

15. (Original) Apparatus as claimed in claim 13, characterized in that the parity preserving coder is a 17PP coder

16. (Original) Apparatus as claimed in claim 15, characterized in that the precoder is operative to precode the stream of M input words using the following table:

In	Out
00	1010
01	0001
10	0111
11	0101
1010	00001000

PATENT
Serial No. 10/517,976
Amendment in Reply to Final Office Action mailed on May 5, 2006

17.(Original) Apparatus as claimed in claim 15, characterized in that the precoder is operative to precode the stream of M input words using the following table:

In		Out
00	->	10 10
10	->	00 01
11	->	01 11
01	->	01 01
11 11	->	00 00 10 00

18.(Previously Presented) Apparatus as claimed in claim 16, characterized in that the apparatus is operative to remove remaining DC components using a high-pass filter before storing the groups of N code words using the groove position modulation on the storage medium.

19.(Original) Record carrier comprising a stream of M input words stored as a stream of groups of N code words,

PATENT

Serial No. 10/517,976

Amendment in Reply to Final Office Action mailed on May 5, 2006

characterized in that a running digital sum of each group of N code words equals zero.

20. (Original) Record carrier as claimed in claim 19, characterized in that $N=2$

21. (Previously Presented) Record carrier as claimed in claim 19,

characterized in that the groups of N code words are stored using a groove position modulation

22. (Previously Presented) Record carrier as claimed in claim 19,

characterized in that the stream of M input words is precoded using the following table:

In	Out
00	1010
01	0001
10	0111

PATENT

Serial No. 10/517,976

Amendment in Reply to Final Office Action mailed on May 5, 2006

11 0101

1010 00001000

23. (Previously Presented) Record carrier as claimed in claim
19,

characterized in that the stream of M input words is precoded
using the following table:

In	Out
00	1010
10	0001
11	0111
01	0101
1111	00001000

24. (Original) Method for decoding a stream of N code words
into a stream of M output words,

characterized in that the stream of M output words is
postcoded using the following table:

PATENT

Serial No. 10/517,976

Amendment in Reply to Final Office Action mailed on May 5, 2006

In	Out
1010	00
0001	01
0111	10
0101	11
00001000	1010

25.(Original) Method for decoding a stream of N code words
into a stream of M output words,

characterized in that the stream of M output words is
postcoded using the following table:

In	Out
1010	00
0001	10
0111	11
0101	01
00001000	1111